

# NORTH PORTSEA ISLAND FLOOD AND COASTAL EROSION RISK MANAGEMENT SCHEME - Phase 2

Removal of Great Salterns Quay and  
Milton Common works  
Non-Technical Summary



Working together - protecting our coastline

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# 1. INTRODUCTION

This document provides a non-technical summary [NTS] of the Environmental Statement [ES] prepared in support of the October 2015 planning application submitted to Portsmouth City Council [PCC] in respect of the second phase of construction [Phase 2] of the North Portsea Island Coastal Flood and Erosion Risk Management Scheme. Construction works of Phase 1 (Anchorage Park) of the scheme commenced in May 2015 and are nearing completion.

The coastline of the full North Portsea Island scheme, including the Phase 2 site, is located along the north and east coast of Portsea Island, as shown in **Figure 1.1** (The yellow line indicates the Phase 2 site, for which this ES supports, and the red line indicates the Phase 1 works at Anchorage Park, which are in construction). **Figure 1.2** shows the site boundary in grey and includes the work area, haul routes and site compounds in use during construction.

**Figure 1.1. Location of the full North Portsea Island scheme, including the Phase 2 site.**

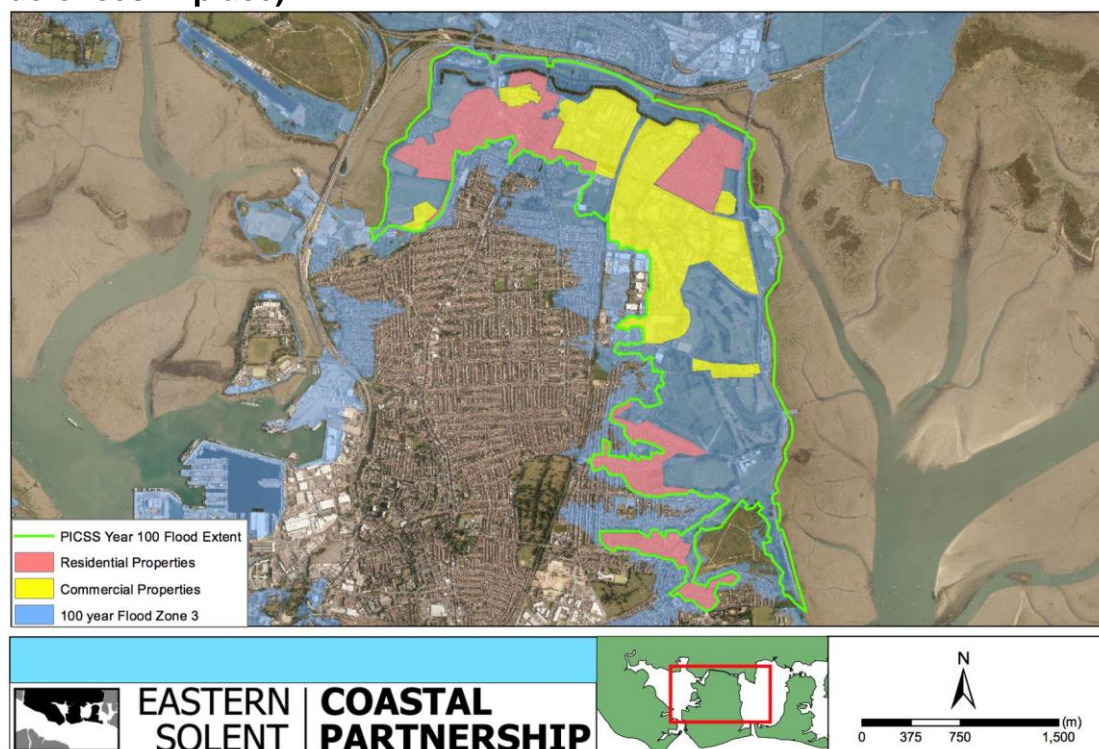


**Figure 1.2 Location of Phase 2 working area, haul routes and compounds**



The Phase 2 works consist of replacing existing coastal defences with new or enhanced structures (at Milton Common), as well as the demolition of a derelict structure (Great Salterns Quay). These have been designed to reduce the coastal flood risk to North Portsea Island, but providing a much improved 1 in 500 year Standard of Protection [SoP]. This means there would only be a 0.2% annual probability of flooding along this coastline. The new structures are designed to last for the next 100 years. **Figure 1.3** illustrates the area of North Portsea Island that would be at flood risk in 100 years if there were no defences in place.

**Figure 1.3: North Portsea Island Year 100 Flood Extent (with no defences in place)**



Due to the size of the North Portsea Island scheme (8.4km), construction will be phased over the next 7 to 10 years. The Phase 1 works (Anchorage Park) commenced in May 2015 and are due for nearing completion. Phase 2 (which this ES supports) is the next phase of works to be taken forward and construction is scheduled to begin in April 2016, funding and approvals permitting.

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## 2. THE EASTERN SOLENT COASTAL PARTNERSHIP [ESCP]

The Eastern Solent Coastal Partnership [ESCP] was formed in 2012 to provide a comprehensive coastal management service on behalf of the four partner authorities: Portsmouth City Council, Havant Borough Council, Fareham Borough Council and Gosport Borough Council.

The ESCP is a small team of specialist coastal officers and engineers that manages coastal erosion and flood risk management across the partner authorities' coastline, some 162km in total.

All members of the ESCP team are employed directly by the partner authorities.

The Environmental Statement has been prepared by the Eastern Solent Coastal Partnership on behalf of Portsmouth City Council as the Applicant.

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### 3. STRATEGIC APPROACH

The North Solent Shoreline Management Plan [SMP] was approved by the Environment Agency [EA] in 2010 and identified a 'Hold the Line' policy for the whole coastline of Portsea Island. This recommended that the standard of protection [SoP] along this coastline should be maintained (or improved) to a 1 in 200 year event level over the next 100 years.

The Portsea Island Coastal Strategy Study [PICSS] was approved by the Environment Agency [EA] in 2011 and covers the whole of Portsea Island. PICSS identified two flood cells as priority areas; Flood Cell 1 – Southsea, and Flood Cell 4 – North Portsea Island. Both flood cells were identified as having existing defences that were below the recommended standard of protection of 1 in 200 years (0.5% Annual Exceedance Probability), or in poor condition, or both. Consequently, PICSS recommended the standard of protection should be improved within the two cells.

The two flood cells are being progressed as separate schemes, and this application relates to the first phase of construction works in North Portsea Island.

The ESCP secured funding from the EA to progress the findings of PICSS and a series of 14 technical scoping reports were produced by the ESCP identifying where further work was required over the two flood cells. The scoping stage was completed in 2013. Upon completion of the scoping stage, the two flood cells were split into separate projects. The recommendations from the scoping stage were taken forward to the North Portsea Island Option Development Preliminary Study [ODPS].

Further investigation during ODPS identified the opportunity to further improve the SoP to 1 in 500 years (0.2% Annual Exceedance Probability), and this is the approach that has been adopted.

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## 4. PLANNING APPROACH

The North Portsea Island scheme will be constructed in phases over the next 7 to 10 years based upon the condition of the current defences, the standard of protection provided by the current defences and the level of risk immediately behind the defences. A new planning application will be submitted for each phase of works.

This application relates to the second phase of construction (**Figure 1.2**), with Phase 1 being the first planning application made in October 2014.

The planning application for Phase 2 was submitted in October 2015, and this document provides a summary of the assessment of any likely significant environmental impacts arising from the full North Portsea Island Scheme, with particular focus on the Phase 2 works. This assessment is supported by a Habitats Regulations Assessment [HRA] and Water Framework Directive [WFD] Assessment to confirm it is environmentally acceptability.

In addition to the planning application we have also submitted a Marine Licence application to the Marine Management Organisation [MMO]. Both applications are to be processed under the auspices of the Coastal Concordat.

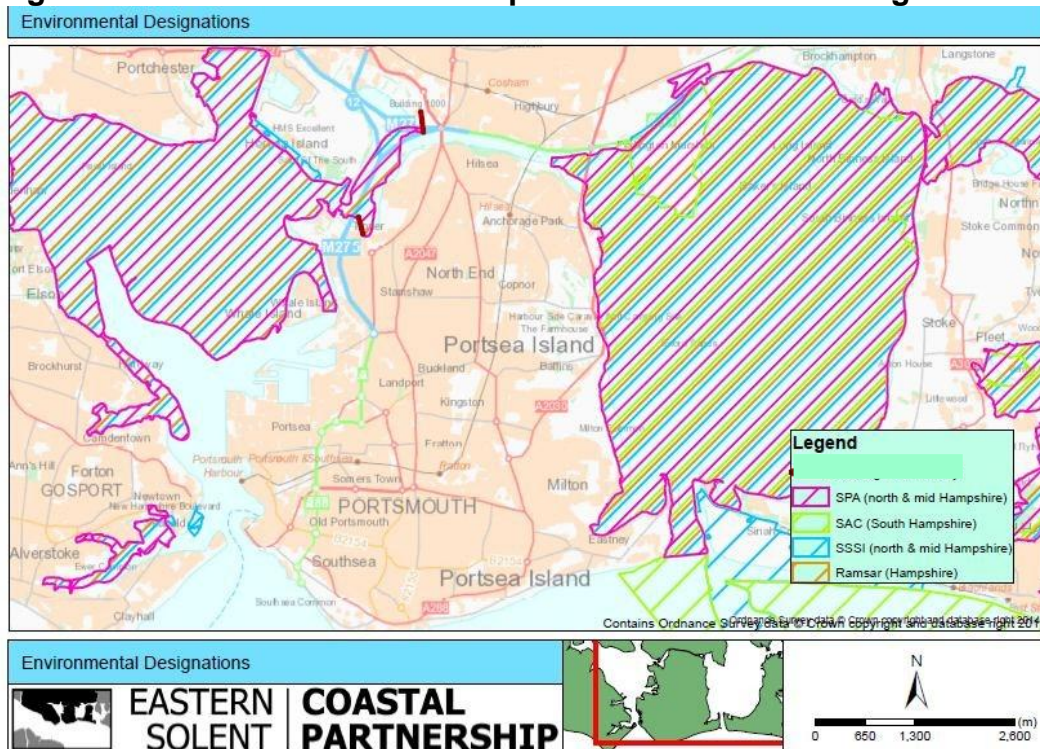
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## 5. THE EXISTING ENVIRONMENT

North Portsea Island and its surroundings support a host of habitats and species of significant ecological and nature conservation importance. This is reflected in the number of sites that have gained European and National environmental designation status.

The North Portsea Island coastline is designated SPA, SAC and Ramsar. **Figure 5.1** illustrates the European designated sites that adjoin the Portsea Island frontage. Several Sites of Special Scientific Interest [SSSI] also occur within and around the North Portsea Island coastline, including Portsmouth Harbour (SSSI), and Langstone Harbour (SSSI). A number of Local Nature Reserves [LNRs] and Sites of Importance for Nature Conservation [SINCs] protect areas in the study area and its surroundings, including Milton Common SINC, Hilsea Lines SINC and Farlington Marshes LNR.

**Figure 5.1: International and European Environmental Designations**



**Table 5.1** provides a summary of the International, European, National and local environmental designations adjacent to each frontage.

**Table 5.1 Frontage Summary of European, National and Local Environmental Designations. The Phase 2 works include Milton Common and Great Salterns Quay (within Eastern Road).**

<b>Frontage</b>	<b>Environmental Designations</b>
<b>Tipner Lake</b>	<b>SPA, Ramsar and SSSI</b>
<b>Ports Creek</b>	<b>None</b>
<b>Anchorage Park</b>	<b>SAC, SPA, Ramsar, SSSI and Hilsea Lines SINC (Farlington Marshes LNR 600m across harbour)</b>
<b>Kendalls Wharf</b>	<b>SAC, SPA, Ramsar and SSSI</b>
<b>Eastern Road</b>	<b>SAC, SPA, Ramsar and SSSI (Great Salterns Lake / Golf Course SINC landward)</b>
<b>Milton Common</b>	<b>SAC, SPA, Ramsar, SSSI and Milton Common SINC</b>

There are no Scheduled Monuments within the location of the Phase 2 works, with the surrounding area being largely green open space with residential areas.

## 6. THE PROBLEM

The existing defences around North Portsea Island consist of a mix of structures, including concrete and earth revetments, mass concrete walls and rock armour revetments. The majority of the structures were constructed between the 1930s and 1980s. The predominant structure type around Phase 2 works area is ad-hoc revetment, as illustrated in **Plate 6.1**.



**Plate 6.1:** Typical existing coastal revetment along the Phase 2 works frontage.

Still water levels often reach to within 200mm of the top of the existing coastal defences and a large coastal surge could result in the defences being overtopped, causing flooding.

**Plates 6.2 and 6.3** illustrate high tide water levels along the Phase 2 coastline on 3rd January 2014.

**Plate 6.2 Wave overtopping at Great Salterns Quay (3<sup>rd</sup> January 2014):**



**Plate 6.3 Flooding of the Eastern Road caused by wave overtopping at Great Salterns Quay (3<sup>rd</sup> January 2014):**





## 7. ALTERNATIVES AND PREFERRED OPTION

For option development, a long-list of alternative scheme options was generated in collaboration with key stakeholders and technical specialists, through a series of steering group exercises.

The long-list options were assessed against six selection criteria: Policy, Technical, Environment, Health and Safety, Cost and Amenity. From this assessment, four short list options were taken forward for consideration.

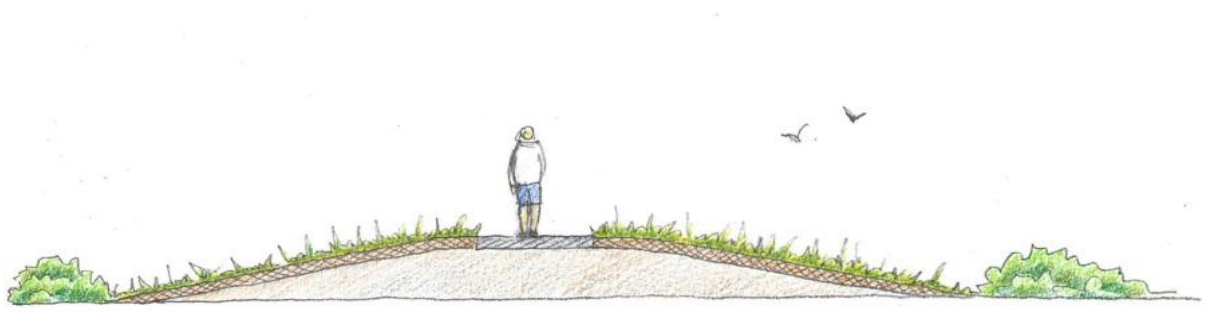
Each of the short listed options was assessed against a suit of environmental impacts, including:

- The historic environment;
- Landscape;
- Designated Sites;
- Soils;
- Water;
- Flora / Fauna;
- Construction.

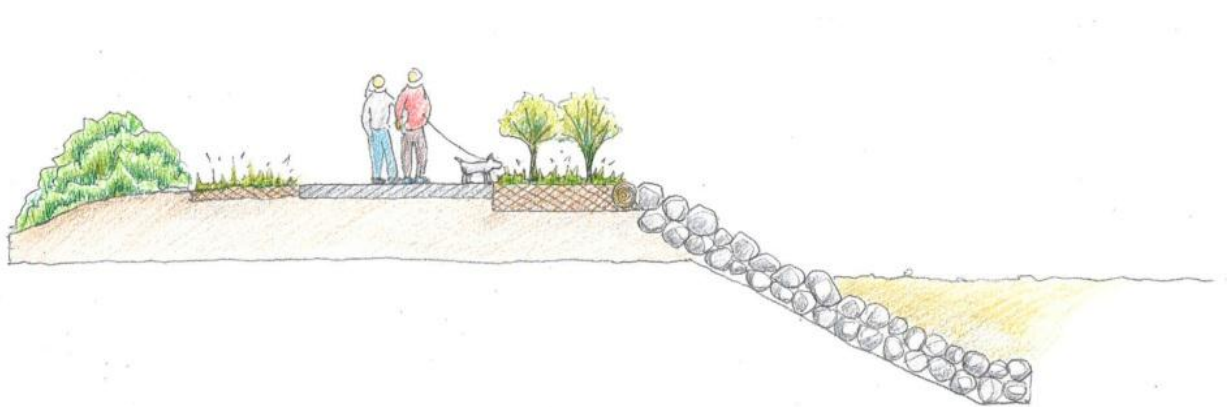
Extensive public consultation on the shortlisted options has been undertaken by Portsmouth City Council, to raise awareness of the project and gain the views of the wider public on the various options being considered. Results of the public consultation were used to inform the option selection process.

The preferred option taken forward for Phase 2 comprises of raised earth embankments on Milton Common and the replacement of the existing ad-hoc rock revetment. An improved path with run along the earth embankments where considered appropriate. In addition, Great Salterns Quay will be removed as part of the Phase 2 works. **Figure 7.1 and 7.2** provide an artists impression of the new structures for Phase 2.

**Figure 7.1:** Sketch of preferred coastal defence structures for Phase 2 – earth embankments.



**Figure 7.2:** Sketch of preferred coastal defence structures for Phase 2 – revetment structures.



## 8. POTENTIAL IMPACTS OF PREFERRED OPTION AND PROPOSED MITIGATION

The key environmental impacts of the preferred scheme are considered within this Section. These impacts only relate to the Phase 2 works, as we have now produced the required level of detail to fully understand the environmental impacts and mitigation required. A similar process was applied to Phase 1 to identify impacts and mitigation, and a similar approach of future phases will be completed in due course.

The environmental acceptability of the scheme was confirmed at the Strategic Level. There is an overriding need to protect significant numbers of people, property and assets along this highly developed frontage, therefore enabling the scheme to be promoted for construction.

**Table 8.1** prevents the impacts of the preferred option on the environment. It contains a summary of the mitigation that will be required to reduce or remove these impacts.

**Table 8.1: Key construction impacts**

Key Impact	Mitigation
Disturbance to overwintering birds during construction (visual and noise impacts).	<ul style="list-style-type: none"> <li>Limit works to avoid overwintering bird sensitive periods.</li> <li>No works with the potential to disturb birds will be undertaken between November and March.</li> </ul>
Impacts on marine environment during construction, in particular: <ul style="list-style-type: none"> <li>Water quality;</li> <li>Fish and shellfish;</li> <li>Marine mammals.</li> </ul>	<ul style="list-style-type: none"> <li>Construction machinery to use biodegradable lubricants and refueling to be undertaken away from the foreshore.</li> <li>Construction activity controlled to prevent pollution to the Langstone Harbour water body from potentially contaminated land.</li> <li>Delivery of the scheme will protect the harbour from existing contaminants – scheme to be delivered as guided by the</li> </ul>

Key Impact	Mitigation
	<p>Contaminated Land Strategy that has been developed (See full ES).</p> <ul style="list-style-type: none"> <li>• Foreshore working footprint restricted, with sediment traps deployed to prevent impacts from suspended sediments.</li> <li>• Minimal piling required, with any activity undertaken at low tide, therefore vibration will not impact fish and marine mammals.</li> </ul>
Opening up pathways between potentially contaminated land and receptors.	<ul style="list-style-type: none"> <li>• Works to be completed in line with the Contaminated Land Strategy;</li> <li>• Works to be advised by the site intrusive investigations that have been undertaken.</li> </ul>
Impacts on intertidal vegetation.	<ul style="list-style-type: none"> <li>• Very limited intertidal vegetation along this frontage, as advised by site habitat surveys.</li> <li>• Construction plant on the foreshore will be strictly controlled to avoid damage to vegetation, where possible.</li> <li>• Some unavoidable damage will occur, however vegetation expected to quickly recover and benefit from the creation of new defence structures within which to establish.</li> <li>• We will continue to monitor re-establishment of vegetation upon completion of works.</li> </ul>
Impact on protected species.	<ul style="list-style-type: none"> <li>• Clearance of landward vegetation in the works footprint has been undertaken outside of breeding and nesting bird seasons.</li> <li>• Reptiles are known to be present on site and their relocation will be achieved through careful habitat management as advised by our Phase 2 Reptile Survey.</li> </ul>
Impact on coastal processes.	<ul style="list-style-type: none"> <li>• Foreshore monitoring will be required following the demolition of Great Salterns Quay, to ensure neighboring sea wall not exposed to greater wave energy following removal. To be advised by Coastal Processes Report, within the ES.</li> </ul>
Disturbance to residents.	<ul style="list-style-type: none"> <li>• Site working hours will be restricted.</li> <li>• Residents to be updated on progress of works and significant activities.</li> </ul>
Dust impacts on people	<ul style="list-style-type: none"> <li>• Dust suppression techniques will be used</li> </ul>

Key Impact	Mitigation
and the wider environment.	during stockpiling and excavation works if required.
Landscape and visual impacts.	<ul style="list-style-type: none"> <li>• Where clearance of vegetation is unavoidable, replanting will be undertaken.</li> <li>• Targeted replanting is expected to benefit the landscape and habitat, offering visual and ecological diversity.</li> <li>• More formal footpaths will be an improvement on the existing paths.</li> </ul>
Impacts to heritage assets.	<ul style="list-style-type: none"> <li>• No heritage assets present, that could be affected (see Heritage Statement within ES)</li> </ul>
Archaeology.	<ul style="list-style-type: none"> <li>• An archaeological Mitigation Strategy has been prepared and will be observed during construction.</li> </ul>
Traffic and Transport.	<ul style="list-style-type: none"> <li>• Where site vehicles cross the highway, priority will be given to local traffic.</li> <li>• Site delivery times will be restricted to reduce impact on local roads.</li> <li>• Haul routes to be managed in accordance with the Traffic Management Plan to be agreed with Contractor.</li> </ul>
Access.	<ul style="list-style-type: none"> <li>• Where footpaths will be impacted by works, alternative routes will be provided where possible.</li> <li>• Haul routes and compounds will be secured to prevent unauthorised access.</li> <li>• Post completion, access will be reinstated and footpath network will be improved.</li> <li>• Safe egress from the foreshore will be maintained</li> </ul>
In-combination impacts.	<ul style="list-style-type: none"> <li>• No in-combination impacts are expected, as set out in the full ES, following an 'In-combination' assessment</li> </ul>
Creation of new intertidal habitat.	<ul style="list-style-type: none"> <li>• This phase of works will provide habitat gain, to mitigate losses of habitat from future phases of the full NPI scheme.</li> </ul>

The above impacts and mitigation relate specifically to the Phase 2 works, however many of the impacts will remain relevant to the full scheme as further phases are progressed.

The full scheme has been assessed to the latest level of detail within the full

ES and future phases of the scheme are expected to have additional environmental impacts. The most significant impact of the delivery of the full scheme is direct loss of European designated inter-tidal habitat where encasement of sea walls will extend the structures seaward. This unavoidable encroachment will be minimal and mitigation for these losses has been identified through the removal of obsolete structures (including Great Salterns Quay) elsewhere in the wider harbours, following discussion with our environmental regulators. The Phase 2 works do not input into this impact. As part of the Phase 2 works, Great Salterns Quay will be removed, therefore providing migratory habitat for these losses that will result from future phases of works. The Phase 2 works do not contribute to encroachment into the European designated sites.

As a result of the increased SoP, the new coastal defence structures will, once completed, be higher than the existing defences. This will naturally have an impact upon the views of the harbours. This will be mitigated by the new structures incorporating raised sections or paths to allow continued enjoyment of the coastal environment. This has a significant environmental benefit by screening European protected bird species from disturbance.

## 9. CONCLUSIONS

Upon completion of the scheme, North Portsea Island will benefit from improved coastal defences, providing an increased SoP. The Phase 1 works (Anchorage Park) has been the first area to benefit, and is nearing completion. Phase 2 is the second area to benefit, with works due to be completed by late 2016, following approvals.

There will be disturbance and disruption during the construction phase caused by plant machinery, foreshore access, site deliveries and the unavoidable need to remove vegetation within the scheme footprint. During construction, views and access will also be impacted temporarily. Upon completion, all site works will be reinstated, and the site will be re-planted.

Whilst there will be short-term, localised impacts on the environment, a full recovery is expected. In addition, the scheme will provide:

- Wider environmental benefits, such as:
  - protecting the harbours from uncontrolled pollution incidents resulting from the flooding or erosion of potentially contaminated land;
  - helping to reduce disturbance to birds through improved screening;
  - providing opportunities for the colonisation of rare flora and fauna within sections of the proposed defences;
  - the new defences will require limited ongoing maintenance, therefore future disturbance to the environment will be avoided.

Subject to funding and consent, work is scheduled to begin on site in April 2016 and end in October 2016.